GENERAL STRUCTURAL NOTES

A. CODES AND SPECIFICATIONS:

1. BUILDING CODE: IBC 2000

2. ACI STANDARDS

ACI 117 - STANDARD TOLERANCES FOR CONCRETE CONSTRUCTION AND MATERIALS ACI 301 - SPECIFICATIONS FOR STRUCTURAL CONCRETE FOR BUILDINGS

ACI 304R - RECOMMENDED PRACTICE FOR MEASURING,

MIXING, TRANSPORTING AND PLACING CONCRETE

ACI 305R - HOT WEATHER CONCRETING

ACI 306.1 - COLD WEATHER CONCRETING

ACI 308 - STANDARD PRACTICE FOR CURING CONCRETE ACI 315 - DETAILS AND DETAILING OF CONCRETE REINFORCEMENT

ACI 347 - GUIDE TO FORMWORK FOR CONCRETE

B. DESIGN LOADS:

- 1. LATERAL WIND 20 PSF WITH 70 MPH. EXPOSURE D. - SEISMIC- 13.5 PERCENT OF COMPONENT DEAD LOADS.
- 2. ALLOWABLE SOIL BEARING 2000 PSF, NET.

C. FOUNDATIONS:

- 1. FOUNDATION ELEVATION SHOWN IS FOR BIDDING PURPOSES AND MAY VARY TO SUIT SUBSURFACE SOIL CONDITIONS.
- 2. ALL BEARING SURFACES SHALL BE APPROVED BY OWNER'S REPRESENTATIVE PRIOR TO CONCRETING.
- 3. FOUNDATION EXCAVATION SHALL BE PERFORMED IN ACCORDANCE WITH ILLINOIS STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, SECTION 502.07. UNSUITABLE SOILS SHALL BE DEFINED AS BUT NOT LIMITED TO PT, OH AND OL, OR ANY OTHER SOIL CONTAINING ORGANIC MATERIAL, AS DEFINED BY ASTM D-2487 OTHER SOILS MAY BE DETERMINED TO BE UNSUITABLE BY THE OWNER'S REPRESENTATIVE DUE TO THEIR IN-SITU CONDITION.

SUITABLE NON ORGANIC SOILS FOR FILL AND BACKFILL ARE MATERIALS DESIGNATED CL,ML,CL-ML,SP,SW,GP AND GW BY ASTM D-2487. FILL AND BACKFILL SHALL BE PLACED IN FOUR (4) INCH TO SIX (6) INCH LIFTS AND MECHANICALLY COMPACTED TO 95 PERCENT OF ITS STANDARD PROCTOR MAXIMUM DRY DENSITY.

- 4. COMPACTED AGGREGATE SHALL BE GRANULAR MATERIAL, ASTM D448 GRADING SIZE 4, PLACED IN 8-INCH MAXIMUM LAYERS, AND COMPACTED TO AT LEAST 90 PERCENT OF MAXIMUM DRY UNIT WEIGHT.
- 5. FOUNDATION DESIGN BASED ON GEOTECHNICAL REPORT BY SCIENGINEERING, INC., DATED SEPTEMBER Ø2, 2003

D. CONCRETE AND GROUT:

- 1. CONCRETE STRENGTH FOR STRUCTURAL FOUNDATIONS, SLAB, WALL PANELS AND GROUTING, IDOT SI F'C = 3,500 PSI @ 14 DAYS.
- 2. PROPORTION NORMAL-WEIGHT CONCRETE TO OBTAIN THE SPECIFIED 28-DAY COMPRESSIVE STRENGTH WITH Ø.45 MAXIMUM WATER-CEMENT RATIO AND AIR ENTRAINMENT CONFORMING TO ACI 350 AND A 4-INCH MAXIMUM SLUMP. CALCIUM CHLORIDE SHALL NOT BE ADDED.
- 3. FURNISH FORM-FACING PANELS TO PROVIDE CONTINUOUS, TRUE AND SMOOTH UNSTAINED CONCRETE SURFACES TO MINIMIZE NUMBER OF JOINTS. DO NOT USE RUST-STAINED MATERIAL.
- 4. DESIGN, ERECT, SHORE, BRACE, AND MAINTAIN FORM WORK PER ACI 347 AND ACI 17 TO SUPPORT VERTICAL, LATERAL, STATIC, AND DYNAMIC CONSTRUCTION LOADS UNTIL CONCRETE STRUCTURE HAS REACHED SPECIFIED STRENGTH.
- 5. PROVIDE EASED EDGE AT TOP EDGES AND CORNERS OF EXPOSED WALLS UNLESS OTHERWISE NOTED.
- 6. PLACE NO PERMANENT LOAD UNTIL CONCRETE HAS REACHED SPECIFIED STRENGTH.
- 7. PROTECT FRESHLY PLACED CONCRETE FROM PREMATURE DRYING AND EXCESSIVE HOT OR COLD TEMPERATURES. CURING SHALL CONFORM TO ACI 308 AND WORK DURING HOT OR COLD WEATHER EXTREMES SHALL COMPLY WITH ACT 305R OR ACT 306.1, RESPECTIVELY.
- 8. JOINTS NOT INDICATED ON STRUCTURAL DRAWING ARE NOT PERMITTED.
- 9. PLACE NO OPENINGS, SLEEVES, INSERTS ETC., IN CONCRETE WORK UNLESS SHOWN ON STRUCTURAL DRAWINGS OR APPROVED IN WRITING BY STRUCTURAL ENGINEER.
- 10. ALL CONSTRUCTION JOINTS TO BE ROUGHENED TO FULL AMPLITUDE OF 1/4-INCH.

E. REINFORCING STEEL:

- 1. ALL REINFORCING FY = 60 KSI YIELD. WELDED WIRE FABRIC SHALL BE SUPPLIED IN FLAT SHEETS ONLY
- 2. CLEARANCES BETWEEN REINFORCING BARS AND CONCRETE SURFACES SHALL BE ACI MINIMUM UNLESS OTHERWISE NOTED.

F. COORDINATION

- 1. FIELD VERIFY EXISTING DIMENSIONS AND ELEVATIONS THAT AFFECT FABRICATION LENGTHS OF MEMBERS PRIOR TO SUBMITTAL OF SHOP DRAWINGS OR FABRICATION.
- 2. REFER TO ARCHITECTURAL DRAWINGS FOR ADDITIONAL EMBEDDED ITEMS, SLEEVES, SLAB PITCHES AND FILLS.

G. CONSTRUCTION

- 1. BRACE ENTIRE STRUCTURE AS REQUIRED TO MAINTAIN STABILITY UNTIL COMPLETE AND FUNCTIONING AS THE DESIGNED UNIT.
- 2. BRACE WALLS BEFORE BACK FILLING AND UNTIL CONCRETE HAS ATTAINED SPECIFIED STRENGTH.

H. SAFETY

- 1. IN ACCORDANCE WITH GENERALLY ACCEPTED CONSTRUCTION PRACTICES, CONTRACTOR WILL BE SOLELY AND COMPLETELY RESPONSIBLE FOR CONDITIONS OF JOB SITE, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY DURING PERFORMANCE OF THE WORK. THIS REQUIREMENT WILL APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS.
- 2. THE DUTY OF ENGINEER TO CONDUCT CONSTRUCTION REVIEW OF CONTRACTOR'S PERFORMANCE IS NOT INTENDED TO INCLUDE REVIEW OF ADEQUACY OF CONTRACTOR'S SAFETY MEASURES IN, ON, OR NEAR CONSTRUCTION SITE.

NOTES

- 1. VERIFICATIONS OF THE LOCATIONS OF THE UNDERGROUND UTILITIES, SHOWN OR NOT SHOWN, SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. ANY DAMAGE TO EXISTING OR PROPOSED FACILITIES, STRUCTURES OR UTILITIES SHALL BE REPAIRED OR REPLACED AT THE CONTRACTORS EXPENSE.
- 2. THE CONTRACTOR SHALL REPAIR ALL DAMAGE TO PROPERTY OUTSIDE LIMITS OF CONSTRUCTION.
- 3. REPORT ANY DISCREPANCIES FOUND WITH REGARD TO EXISTING CONDITIONS OR PROPOSED DESIGN IMMEDIATELY TO THE ENGINEER.
- 4. DO NOT WILLFULLY PROCEED WITH CONSTRUCTION AS DESIGNED WHERE DISCREPANCIES EXIST. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL REVISIONS TO THE WORK WHERE NO NOTICE WAS GIVEN TO THE ENGINEER.
- 5. THE CONTRACTOR SHALL COORDINATE OTHER SITE RELATED OPERATIONS PERFORMED BY OTHER CONTRACTORS TO ACCOMPLISH THE WORK.
- 6. ALL SWALES AND LAND FORMS SHALL BE GRADED TO A SMOOTH FLOWING GROUND SURFACE.
- 7. CONTRACTOR SHALL PROTECT ALL EXISTING FACILITIES TO REMAIN INCLUDING ON-SITE PRIVATE AND PUBLIC PROPERTY.
- 8. ALL IMBEDS FOR LIFTING PURPOSES SHALL BE NON-CORROSIVE STAINLESS STEEL AND SHALL NOT BE VISIBLE.
- 9. PROVIDE SEALED SHOP DRAWINGS FOR CONCRETE PANELS INDICATING DIMENSIONS, AND SURFACE TEXTURE (INCLUDING STEEL REINFORCEMENT FINAL ARRANGEMENTS, SHAPES AND ATTACHMENTS) FOR REVIEW AND APPROVAL.
- 10. EACH CONCRETE PANEL SHALL BE MONOLITHIC AND HAVE NO JOINTS.
- 11. ROUGH DIMENSIONS FOR THE CONCRETE PANELS ARE FOR BIDDING PURPOSES ONLY. THE SUCCESSFUL BIDDER WILL BE GIVEN AN ELECTRONIC AUTOCAD DRAWING TO BE USED FOR DETAILED LAYOUT OF THE FORMWORK.

EARTHWORK SCHEDULE

MONUMEN	IT LOCATION	EARTH EXCAVATION (CUBIC YARD)	EARTH EXCAVATION ADJUSTED FOR 25% SHRINKAGE (CUBIC YARD)*	FURNISHED EXCAVATION (CUBIC YARD)	EARTHWORK BALANCE WASTE (+) OR SHORTAGE (-) (CUBIC YARD)		
1	HARTFORD	13.4	Ø	8Ø	-8Ø		
2	PERE MARQUETTE STATE PARK	13.4	Ø	, 8Ø	-8Ø		
TOTAL		26.8	Ø	160	-160		

* EARTH EXCAVATION TO BE REMOVED FROM SITE AND PROPERTY DISPOSED OF.

SUMMARY OF QUANTITIES					CONSTRUCTION TYPE CODE			
CODE NO.	ITEM	UNIT	QUANT.	-				
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XX005642	GATEWAY MONUMENT SIGN COMPLETE	EACH	2					
XX005643	MCADAMS MONUMENT COMPLETE	EACH	1					
XX005644	MINOR SIGN COMPLETE	EACH	1	-				
20200100	EARTH EXCAVATION	CU YD	26.80					
20201200	REMOVAL AND DISPOSAL OF UNSUITABLE MATERIAL	CU YD	5.00					
20400805	FURNISHED EXCAVATION	CU YD	160.00					
25000100	SEEDING, CLASS I	ACRE	Ø.44				,	
25000400	NITROGEN FERTILIZER NUTRIENT	LB.	35.00					
25000500	PHOSPHORUS FERTILIZER NUTRIENT	LB.	35.00					
25000600	POTASSIUM FERTILIZER NUTRIENT	LB.	35.00	*				
25100105	MULCH, METHOD 1	ACRE	Ø.44					
28000400	PERIMETER EROSION BARRIER	F00T	140.00					
35100200	AGGREGATE BASE COURSE, TYPE A	CU YD	26.80					
50300225	CONCRETE STRUCTURES	CU YD	28.40	***************************************				
50800105	REINFORCEMENT BARS	LB	4609.00		,			
67100100	MOBILIZATION	L. SUM	1					
70101700	TRAFFIC CONTROL AND PROTECTION	L. SUM	.1					

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ABBREVIATIONS

:			
C.J.	CONTROL JOINT	N/A	NOT APPLICABLE
C.L.	CENTER LINE	N.I.C.	NOT IN CONTRACT
CONC.	CONCRETE	NO.	NUMBER
DIA., *	DIAMETER	PVMT	PAVEMENT
DWG	DRAWING	PROP.	PROPOSED
EA.	EACH	R	RADIUS
E.J.	EXPANSION JOINT	R.O.W.	RIGHT OF WAY
ELEV. OR EL.	ELEVATION	SDWK	SIDEWALK
EXST. OR EXIST.	EXISTING	SFF	SQUARE FOOT OF FACE
FT.	FEET	SHT.	SHEET
H.P.	HIGH POINT	TR	TO REMAIN
нт.	HEIGHT	T.B.R.	TO BE REMOVED
IN.	INCH	TYP.	TYPICAL
L.F.	LINEAR FEET	W/	WITH
MAX.	MAXIMUM	#	NUMBER, POUND
MIN.	MINIMUM	&	AND
IDOT	ILLINOIS DEPARTMENT	%	PERCENT
	OF TRANSPORTATION	0	AT

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